

# Patent [19]

[11] Patent Number: 2000140087

[45] Date of Patent: May. 23, 2000

---

## [54] STERILIZE-DEODORIZING DEVICE

[21] Appl. No.: 10324933 JP10324933 JP

[22] Filed: Nov. 16, 1998

[51] Int. Cl.<sup>7</sup> A61L00920; A61L00900; A61L00922; A61N00144; B01D05386; B01J03502; B60H00300; F24F00100; F24F00316

## [57] ABSTRACT

**PROBLEM TO BE SOLVED:** To improve the sterilization and deodorization effects, promote the miniaturization, and expand usages of the device by arranging a blowing fan and a photocatalyst filter having a stereoscopic structure equipped with a large number of ventilation holes, across an ultraviolet lamp, and at the same time, forming the surfaces of rotating blades of the blowing fan into an ultraviolet ray reflecting structure.

**SOLUTION:** When a power source switch 12 is turned on, a blowing fan 7 rotates, and fouled air in a room is sucked into the device through a filter 3 for sucked air. Then, the sucked air cools a print substrate 8 for control, and is irradiated with beams from an ultraviolet ray lamp 5, and bacteria or the like are sterilized, and at the same time, a malodor substance is decomposed by an oxidation-reduction reaction of a photocatalyst filter 9. In this case, the surfaces of the rotating blades 7a of the blowing fan 7 are formed into an ultraviolet ray reflecting structure, and the ultraviolet rays are irregularly reflected in the direction to the photocatalyst filter 9, and the ultraviolet rays are made to reach the deep section of the photocatalyst filter 9. By this constitution, the improvement of the sterilization and deodorization effects, and the promotion of the miniaturization can be achieved, and usages of the device are expanded.

\*\*\*\*\*